

In re: Application of KERR et al.
Application No.: 10/798,191
Examiner: Delia M. Ramirez
Confirmation No: 5136
Response to Restriction Requirement

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Amendments to the Claims

The following listing of the claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-13 (canceled)

Claim 14 (new): A method of cyclizing a substrate capable of being cyclized by an elisabethatriene cyclase, the method comprising the step of: contacting the substrate with a purified elisabethatriene cyclase under reaction conditions that result in cyclization of the substrate.

Claim 15 (new): The method of claim 14, wherein the substrate is geranyl geranyl diphosphate (GGPP).

Claim 16 (new): The method of claim 14, wherein the substrate is geranyl geranyl diphosphate analogue selected from the group consisting of: GGPP analogues, 3-PhGGPP, farnesyl diphosphate (FPP), FPP isomers, and FPP analogues.

Claim 17 (new): The method of claim 14, wherein the substrate is a phosphoisoprenoid.

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Claim 18 (new): The method of claim 14, wherein the step of contacting the substrate with a purified elisabethatriene cyclase is performed as part of a method for producing a pseudopterosin.

Claim 19 (new): The method of claim 14, wherein the step of contacting the substrate with a purified elisabethatriene cyclase results in the production of elisabethatriene.

Claim 20 (new): A method of cyclizing a substrate capable of being cyclized by an elisabethatriene cyclase, the method comprising the step of: contacting the substrate with a purified elisabethatriene cyclase under reaction conditions that result in cyclization of the substrate,

wherein the purified elisabethatriene cyclase has the following characteristics: (A) an apparent molecular weight of about 47,000 Da; (B) an isoelectric point of about 5.1; and (C) the ability to cyclize geranyl geranyl diphosphate, wherein the purified protein comprises the amino acid sequences of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, and SEQ ID NO:5.